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IN THE APPLICATION

OF

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FOR A

GOLF BALL LIFTER

GOLF BALL LIFTER

BACKGROUND OF THE INVENTION

1. FIELD OF THE INVENTION

5 The present invention relates to retrievers. More particularly, the present invention relates to a golf ball lifter and retriever.

2. DESCRIPTION OF THE RELATED ART

10 The playing of the game of golf involves reaching over to pick up a golf ball for marking, cleaning, and removal of the ball from the cup. This involves substantial effort, particularly for those players with physical limitations. Known golf ball lifters or retrievers are complex, require carrying an extra shaft, are bulky, are limited in function, or
15 are subject to quick deterioration during use. It would be desirable to provide a golf ball lifter and retriever which may easily be carried by the user or mounted on the butt end of a

club grip, is rugged such as to withstand repeated use and avoid damage when the club upon it is mounted is placed in a golf bag, and is effective for easily lifting a ball from the ground or a golf cup and provides for easy removal of the ball by the user.

U.S. Patent No. 1,830,520, issued November 3, 1931, to Moyses, describes a golf ball lifter employing a suction cup mountable on the end of the grip of a golf club or the like such as a putter.

U.S. Patent No. 4,021,068, issued May 3, 1977, to Piazza, describes a golf ball retriever for retrieving a golf ball from a hazard such as water, sand, or rough which employs a vacuum pumped golf ball receiver.

U.S. Patent No. 5,190,288, issued March 2, 1993, to Rogers, describes a golf club attachable ball retriever which is collapsible to be carried flat in a pocket. The retriever has two fingers having indentations for holding the golf ball.

U.S. Patent No. 5,423,543, issued June 13, 1995, to Tarrant, describes a specialized golf shaft having ball mark repair elements extending from the grip and a scoop-like golf ball lifter for scooping the ball from the golf cup.

U.S. Patent No. 5,460,366, issued October 24, 1998, to Pugh, describes a golf ball retriever for fitting on the butt

end of a golf club grip having pairs of opposed elastic fingers which slip over and close on a golf ball to be lifted or retrieved.

5 U.S. Patent No. 5,690,558, issued November 24, 1997, to Huber, describes a golf ball lifter or retriever having two opposed golf ball gripping fingers and a device for dropping a marker for putting.

10 U.S. Patent No. 6,120,387, issued September 19, 2000, to Bobst, describes a golf ball retriever system for attachment to the butt end of a golf grip which is cylindrical, having an elastomeric lock near its base when in use which stretches over the golf ball upon application of downward force and traps the ball in the cylinder for removal through an upper sidewall opening.

15 U.S. Patent No. 6,409,611, issued June 25, 2002, to Louk, Jr. et al. describes a golf swing training umbrella having a removable ball retrieving scoop at the butt end of the handle for retrieving golf balls from hazards such as water.

20 British Patent No. GB2 128 484 A, published May 2, 1984, describes a golf ball retriever having a polymeric cup having a rib which stretches over the golf ball for securing and lifting the ball.

European Patent Application EP 0 435,120 A1, published October 23, 1991, describes a golf ball retriever as part of a golf club grip having spring loaded fingers for grasping the golf ball.

None of the above inventions and patents, taken either singly or in combination, is seen to describe the instant invention as claimed. Thus, a golf ball lifter solving the aforementioned problems is desired.

SUMMARY OF THE INVENTION

The present invention is a golf ball lifter and retriever made of a flexible, resilient, yet relatively stiff elastomeric plastic or rubber material for durability and function during repeated and extended use. The inventive ball lifter may easily be separately carried in the pocket of a golf bag or the like and may be mounted on the butt end of a club grip such as that of a putter. The inventive ball lifter may remain on the grip of the club for extended periods, the lifter/retriever remaining on the club when stored in a golf bag in the normal manner without sustaining damage from the bag. The inventive ball lifter is generally cylindrical in shape having a ball engaging end portion and a club grip engaging end portion separated by a solid wall, the ball engaging end portion having

four tapered fingers formed by lengthwise slits extending inward from the ball engaging end of the lifter.

The tapered fingers are in the general shape of truncated triangles forming gripping lips at the ball-engaging end. The slits are formed by the longitudinal edges of the tapered fingers and end in a circular bore acting as edge joints to avoid cracking at the end of the slits during repeated use. The fingers thus formed have two or more parallel circumferential ribs extending inward from the inner wall of the respective fingers to provide grip for holding the golf ball, the first rib being an inward extension of the gripping lips.

The fingers are spread apart when receiving the golf ball through downward pressure thereon and the gripping ribs have been found effective in retaining the ball, regardless of dimple size or pattern. The ball is mechanically held due to the elasticity of the elastomeric fingers and ribs and does not require suction for engagement, suction being unreliable due to dimples, irregularities, or debris or mud on the ball surface. The fingers are stretched from their rest position when engaging the ball and, due to their elasticity, grip the ball with the inner ribs. The fingers and ribs adequately grip a golf ball for lifting by engaging a portion of the ball which

is less than a full hemisphere, allowing the lifter to be smaller in size than many of the previously described lifters or retrievers. The inventive lifter is useful in lifting a golf ball from a grassy surface such as a golf green and from the bottom of a golf cup. The lifter may also be useful for retrieving a ball from a hazard.

Accordingly, it is a principal object of the invention to provide a golf ball lifter mountable on a shaft such as the butt end of a golf club.

It is another object of the invention to provide a golf ball lifter as above which releasably grips a golf ball regardless of dimple size and pattern.

It is a further object of the invention to provide a golf ball lifter as above which secures a golf ball by engaging a portion of the ball which is less than a full hemisphere.

Still another object of the invention is to provide a golf ball lifter as above which is relatively small for ease in carrying.

Yet another object of the invention is to provide a golf ball lifter as above which is equally effective in lifting a ball from a grassy surface or from a golf cup.

It is an object of the invention to provide improved elements and arrangements thereof for the purposes described which

is inexpensive, dependable and fully effective in accomplishing its intended purposes.

These and other objects of the present invention will become readily apparent upon further review of the following specification and drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is an environmental, perspective view of a golf ball lifter according to the present invention engaging a golf ball on a putting surface.

Fig. 2 is an environmental, perspective view of the golf ball lifter according to the present invention after lifting the ball to a position to be easily removed by the user.

Fig. 3 is a detail perspective view of the golf ball lifter of Fig. 1 as installed on the butt end of a golf club grip.

Fig. 4A is a side elevation view of the golf ball lifter of Fig. 1 with a finger partially cut away.

Fig. 4B is a sectional view of the golf ball lifter of Fig. 4A.

Fig. 5 is a side elevation view of the golf ball lifter of Fig. 4A rotated 45 degrees around its central longitudinal axis.

Fig. 6 is an end view of the golf ball lifter of Fig. 4A looking at the golf ball engaging portion.

Similar reference characters denote corresponding features consistently throughout the attached drawings.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

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The present invention is a golf ball lifter for fitting over a shaft such as the butt end of a golf club grip and useful for gripping a golf ball and lifting it from a grassy surface such as a golf green or from the bottom of a golf cup. The ball may then be easily removed from the lifter, the user avoiding bending over to reach for the ball from the green or cup. The golf ball lifter may also be useful for retrieving a golf ball from a hazard.

Referring to the Figures, golf ball lifter **10** has a grip attachment portion **12** for mounting on a shaft such as the butt end of the grip **G** of a golf club having a shaft **S** and a head **H** (shown in Figs. 1-3 with a head cover such as that used on a putter). The golf ball lifter **10** is generally cylindrical in

shape, having a central longitudinal axis and has a golf ball engaging portion **14** extending from the attachment portion **12**. Ball engaging portion **14** has outward extending golf ball gripping fingers **16** which expand and grip the golf ball **B** upon application of pressure by the user **U** on the lifter **10** by means such as shaft **S** of the golf club. The club may then be lifted and rotated to a position as in Fig. 2 where the user **U** may easily remove the ball **B** from the gripping fingers **16**, grasping the ball with his other hand (not shown).

Referring to Figs. 3-6, a detail of Fig. 1 (see Fig. 3) is shown with the lifter **10** mounted on grip **G** and grasping golf ball **B**. As is shown, golf ball engaging portion **14** of lifter **10** has outward extending gripping fingers **16** expanded outward from the rest position as shown, for example, in Fig. 4. The lifter **10** is made of a stiff elastomeric material such as plastic or hard rubber, the fingers **16** of which exert a radially inward force on the ball **B** working opposed to each other resulting in the gripping of the golf ball. The preferred number of gripping fingers is four as shown in the Figures, however a smaller or larger number of fingers may be employed in the lifter device **10**. Lifter attachment portion **12** is generally cylindrical in shape and tubular in construction, having a grip entrance lip **18** at the grip receiving end of grip

receiving cavity **13**. Lifter attachment portion **12** has a cylindrical inner side wall extending from lip **18** to an inner end wall **22** forming grip receiving cavity **13** for receiving and retaining the butt end portion of grip **G**. The cylindrical inner sidewall is of such diameter as to form a friction fitting with the grip **G** and, being made of elastomeric material, may be slightly expanded to fit a desired shaft.

Grip attachment portion **12** has an outer cylindrical wall **24**, which preferably tapers outward from the lip **18** at the grip **G** to the connection with ball engaging portion **14** for ease of grip insertion, economy of material, and a smooth overall form and neat appearance. The grip attachment portion **12** ends in a circumferential outer edge **26** from which golf ball engaging portion **14** extends.

Golf ball engaging portion **14** is generally cylindrical in shape and tubular in construction having a longitudinal central axis coinciding with that of the grip attachment portion **12**. Ball engaging portion **14** forms a golf ball receiving cavity **15** defined by wall **34** of uniform thickness which tapers radially inward from circumferential outer edge **26** and inner end wall **42** (see Figs. 5 and 6) as it extends outward, ending in gripping finger lips **28**. Gripping fingers **16** are formed in the cylindrical wall **34** by longitudinal edges **30** extending outward

from circular edge joints 32, equally spaced outward from circumferential outer edge 26, to the extreme end of ball engaging portion 14 as defined by lips 28. Fingers 16 are in the general shape of a truncated triangle extending outward from the edge joints 26 and are preferably the same length.

The gripping fingers 16 form expanding slits therebetween along their length which are generally triangular in shape, expanding along their length as the gripping fingers are spread over a golf ball B (see Fig. 3). Gripping finger lips 28 form a segmented circle at a location along the central axis of the golf ball lifter 12 which defines the outer end of the golf ball engaging portion 14. The gripping fingers 16 each have an outer gripping rib 38 extending radially inward as an inward extension of the respective lips 28 and an inner gripping rib 40 spaced axially inward from and parallel with outer gripping rib 38 along inner wall surface 36 of engaging portion wall 34. The gripping ribs are preferably bead-shaped, having a half circular cross section, and additional gripping ribs may be added, spaced inward and parallel with gripping ribs 38 and 40 along inner wall surface 36 as desired. Each of the gripping ribs extend the entire radial distance between longitudinal edges 30 of its respective gripping finger 16. The gripping

ribs **38** and **40** provide for an enhanced grip of the golf ball by gripping fingers **16**.

In operation, golf ball lifter **10** is installed over the butt end of a golf club grip **G** by inserting grip **G** into grip receiving cavity **13** in tubular grip attachment portion **12** through lip **18** until inner end wall **22** is reached. A friction or stretch fit is induced between the grip attachment portion **12** and the grip **G**. The user **U** then inverts the shaft **S** and places the gripping fingers **16** of ball engaging portion **14** over and against the golf ball **B** as it rests on a grassy surface or in the bottom of a golf cup. The user then exerts downward pressure on the shaft, forcing gripping fingers **16** to expand outward as they slide over the upper surface of the golf ball. The user continues pressing downward, forcing fingers **16** downward and outward over the ball surface until a grip is achieved on the golf ball **B** within the end portion of golf ball receiving cavity **15**. This is determined by lifting the shaft **S** slightly to check if the ball is secured to the ball lifter **12** and, thus, lifts with upward movement of the shaft **S**. Once securely engaged with the golf ball and the ball is lifted from the ground or cup, the ball lifter is rotated upward by the user **U** by rotating the shaft until the golf ball is easily grasped by the user's other hand. The user may then easily

grasp the ball and pull it from the fingers of the lifter. The fingers of the lifter then return to their rest position due to the spring action of the elastic material of the lifter.

The preferred dimensions of the golf ball lifter **10** include an overall axial length of 2 3/4 inches and a maximum diameter of 1 5/8 inches. The maximum diameter of the grip attachment lip is 1 5/16 inches and the inside diameter of the tubular attachment portion is 1 1/16 inches. The depth of the grip attachment portion is 1 1/16 inches axial length between the lip and the inner end wall thereof forming the grip receiving cavity. The diameter of the ball engaging portion when at rest is 1 3/8 inches at the gripping finger lips. The internal axial length between the gripping finger lips and the inner wall **36** forming the receiving cavity is 1 1/4 inches. The thickness of the grip attachment lip is 1/8 inches and the thickness of the engaging portion wall including the gripping fingers is 1/8 inch. The diameter of the circular finger edge joints are 1/4 inch and the spacing between gripping fingers at rest measured between the respective lips is 3/8 inches. The radial thickness of the bead shaped gripping ribs is from 1 to 2 millimeters and the axial spacing of the inner gripping rib **40** and the outer gripping rib **38** is about 0.5 centimeters. Dimensions may vary within a range as desired.

The inventive golf ball lifter is an integral structure, preferably made of a flexible, resilient, yet relatively stiff elastomeric plastic or rubber material such as that useful for furniture leg coasters. The material should have resilient properties such that when the fingers are pressed over a golf ball, a sufficient gripping force is developed in the finger and upon removal of the golf ball the fingers return to their rest position.

It is to be understood that the present invention is not limited to the embodiment described above, but encompasses any and all embodiments within the scope of the following claims.